START
Statewide Autism Resources & Training
www.gvsu.edu/autismcenter

Using Principles and Strategies from Applied Behavior Analysis (ABA) to Teach Young Children with Autism Spectrum Disorder

Amy Matthews, Ph.D., BCBA
Jamie Owen-DeSchryver, Ph.D.
Grand Valley State University

SHOUT
SHARE
IT

Presentation Summary

- What is ABA and Why Use it with Young Children with ASD and Related Disabilities
- What do we Teach
- How do we Teach
- Examples of Organizing Teaching for Specific Skills

Recommendations

- At least 25 hours/week of active engagement in intensive instructional programming (National Research Council, 2001)
- Teaching may be conducted in the natural environment to capitalize on motivation and promote generalization
- Delivered by professionals and parents

What is possible with intensive instruction?

Why was Anne Sullivan's teaching successful?

- Individualized
- Intensive
- Repetition
- Follow through
- Targeted
- High expectations
- Failure was not an option

Children with ASD Need Good Teaching Even More Than Most Kids

START
Statewide Autism Resources & Training

Neurotypical Child	Child with Autism
1,000 learn units a day	Few learn units a day
Learn from their environment	Poor observational learners
Specific instruction not needed	Specific instruction necessary
Strong speaking skills	Weak speaking skills
Strong listening skills	Weak listening skills

A child with autism has to learn at a faster rate than typical peers just to catch up.

How many learning opportunities?

More Learning Opportunities

Provide individualized, intensive teaching to increase learning for students who do not learn from the natural environment or through typical routines and activities

Why Applied Behavior Analysis (ABA)?

Research supports intensive, structured intervention

National Standards Project
National Professional Development Center on ASD
American Academy of Pediatrics
Association for Science in Autism Treatment
Surgeon General
Wrightslaw
…and more

What is ABA?

ABA systematically applies procedures based on behavioral principles to the instruction and modification of socially significant behaviors.

7 Dimensions of ABA

Dimension	Description
Applied	Intervention is designed to have a meaningful, positive impact on the life of the child.
Behavioral	The target behavior can be directly observed and measured.
Analytical	Data show that the intervention is responsible for the change in behavior
Conceptual	Interventions are research-based behavioral strategies
Technological	Teaching procedures are written explicitly enough to be implemented in the same way by everyone
Effective	Intervention results in significant positive change in behavior
Generality	Skills learned can be maintained over time and generalized across people, settings, and contexts

Leach (2012) based on article by Baer, Wolf, & Risley (1968)

START
Statewide Autism Resources & Training

ABA methods are used to support individuals with ASD in at least six ways:

- Increase behavior
- Teach new skills
- Maintain behavior
- Generalize behavior
- Narrow conditions of behavior
- Reduce interfering behaviors

ABA methods are used to support individuals with ASD in at least six ways:

- to **increase behaviors** (e.g. reinforcement procedures increase on-task behavior, or social interactions)

- to **teach new skills** (e.g. systematic instruction and reinforcement procedures teach functional life skills, communication skills, social skills)

ABA methods are used to support individuals with ASD in at least six ways:

- to **maintain behaviors** (e.g. teach to fluency, self-monitoring procedures to stay on task)

- to **generalize or to transfer behavior** from one situation or response to another (e.g. skills learned at home transfer to playgroup)

ABA methods are used to support individuals with ASD in at least six ways:

- to **restrict or narrow conditions** under which interfering behaviors occur (e.g. playing with trains has a time and a place)

- to **reduce interfering behaviors** (e.g. aggression, self-stimulatory behaviors)

What is ABA?

- Reduces frustration by building skills gradually and using prompting and reinforcement to support learning
- Effective way to teach many new skills
- Individualized
- Ongoing monitoring through data collection

Teaching Methods Based on ABA

- Discrete Trial Teaching (DTT)
- Incidental Teaching

- Verbal Behavior
- PECS
- Pivotal Response Teaching

Behavior Teaching Strategies

- Positive reinforcement
- Differential Reinforcement
- Prompting/fading
- Shaping
- Time delay
- Task analysis/chaining
- Behavioral momentum
- Modeling/imitation
- Contingent imitation

- Environmental arrangements
- Following the child's lead
- Embedded trials
- Video modeling
- Self-monitoring
- Peer mediated interventions
- Social narratives
- AAC

START
Statewide Autism Resources & Training

What ABA isn't

- Only discrete trial teaching
- Imposing demands
- Restricted to certain environments
- Restricted to implementation by professionals

What to Teach

Expectations

Critical Areas of Deficit

Foundational Communication

Expectations

Give children the opportunity to repeatedly experience everything their peers do regardless of skill level.

Establish your Expectations: Home and Play Groups

- Expectations for meals
- Expectations for inside play
- Expectations for outside play
- Hand washing
- Expectations for diapering
- Expectations for bathroom
- Expectation for dressing
- Expectations for bedtime
- Expectations for car rides
- Expectations for community trips

Expectations ~ Snack or Meals

- Eat at table with family or group
- Leave plate, cup, and napkin on table
- Wipe mouth and hands with napkin
- Eat with fork/spoon if needed
- Drink from an age-appropriate cup
- Request desired foods/drinks with speech/pictures/signs
- Remain at the table until excused
- Clean up when asked

Expectations~ Inside Play

- Play appropriately with toys
- Respond to social-play initiations from parent/sibling/friend
- Assert self appropriately if sibling/friend tries to take something
- Take turns and share toys
- Follow basic rules of activities
- Clean up when requested by adult

Expectations ~ Bedtime

- Take off clothes and put them in the laundry hamper
- Change into pajamas
- Use bathroom (see bathroom expectations)
- Brush teeth
- Turn off bathroom light
- Get into bed when requested

Expectations ~ Community Trips (e.g., shopping)

- Use inside voice
- Keep hands to self or on a parent selected transition object from home if needed
- Stay with adult
- Sit in cart or walk along side adult
- Follow directions
- Wait in line patiently

Expectation ~ Sitting on Request

For young children sitting is not in their nature but it is a skill they will need to possess in pre-school and beyond. Working on this skill at home will set the foundation for future success in the school setting.

Expectations

- All the expectations listed are designed to build a child's independence.
- In the beginning, expect to prompt and support the child to complete the task.
- With repeated exposure and success, the level of prompting will be gradually reduced and a pattern will be established.

Observational Data Sheet for Expectations

Child Name: _____

Expectations for outside play	Date:	Date:	Date:	Date:	Date:
Put on shoes, socks, and outer garments when going out					
Play appropriately with toys					
Take turns and share toys/equipment					
Remain in yard/playground					
Respond to social-play initiations from parent/sibling/friend					
Come back inside when requested by adult					
Take off and put away outer garments when coming in					

Prompt level key:
I – Independent, VB – Verbal, V – Visual, PP – Partial Physical, FP – Full Physical

What to Teach

Expectations

Critical Areas of Deficit

Foundational Communication

Top 3 Targets for Young Children with ASD

- **Imitation Skills**
- **Social responsiveness**
  - Responsive to requests
  - Responding to initiations
- **Teaching Requesting** (Manding)

(Weiss & Zane, 2010)

1. Imitation Sample Targets

One-Step "Do this"

- Put on hat
- Feed doll
- Brush hair
- Open book
- Put coin in a bank
- Scribble with a crayon
- Put arms up
- Blow a kiss
- Throw away
- Wave
- Open mouth wide
- Push a car

Two-Step "Do this"

- Stand up and jump
- Knock and open the door
- Turn around and clap
- Open mouth and stick out your tongue

Imitation Generalization and Extension

- Imitate a sibling during play
- Imitate actions in children's songs
- Follow and imitate another child at the playground
- Simon says
- Dress up
- Talking on the phone

2. Social Responsiveness

- Responds to name
- Responds to praise and rewards delivered by adults
- Returns greetings
- Makes a choice when items are presented
- Shares a toy with a sibling or peer
- Follows one-step direction to give
- Responds to emotions in others

3. Manding (Requesting)

- Make requests for desired items
- Make requests for needs
- Make requests for help
- Make requests for attention

- To be discussed in another presentation in the afternoon

Requesting Train

Other Universal Behaviors to Teach

- Help
- Making choices
- Schedule or timer
- Yes/No

How to Teach

Request, Response, Reaction

Prompting

Motivation

Reinforcement

Presenting Instruction

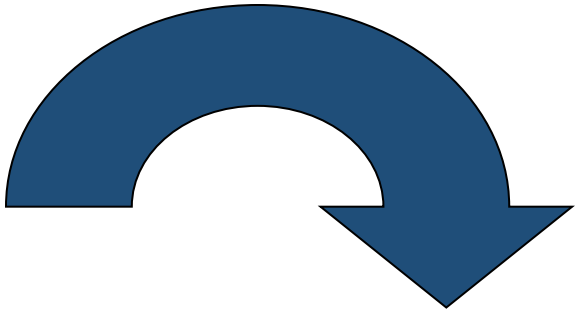
Request
(Stimulus)

Response

Reaction
(Consequence)

3Rs

Presenting Instruction



REQUEST	RESPONSE	REACTION

Instruction/Stimulus

"Do This": Imitation

"Match": Pre-academic

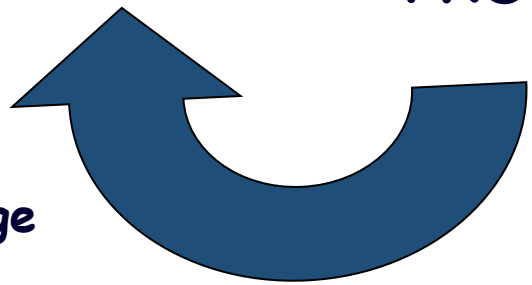
Picture sequence: Play Skills

"Give me the . . .": Receptive Language

"Line up" : Classroom Routines

REINFORCEMENT

PROMPT



The 3 Rs are what we call a "Learning Opportunity" or "Learning Trial"

More About the 3 Rs

- Who presents
- Where to present
- What do you present
- How to prompt
- How to reinforce
- How quickly to present

Request

Response

Reaction

What are the 3 Rs?

The Basics of
Applied Behavior Analysis (ABA)

Prompting

- Prompting involves helping the child give the correct response after a given request.
- When learning new tasks, a child needs help to understand the connection between the request and the desired response.
- Prompts increase the success of the child.

Prompting

Prompting may occur at the same time as the request, right after the request, or even before the request.

Summary of Response Prompts

- **Verbal prompts**
- **Visual prompts**
  - Model prompts
  - Picture prompts
  - Gestural prompts
  - Positional prompts
- **Physical prompts**
  - Blocking
  - Initiation prompts
  - Full Physical prompts

Verbal Prompts

- **Verbal prompts** involve providing a verbal instruction, cue, or model
- May overemphasize the correct word in an array of choices
- Direct and indirect prompts
  - Direct – "get your **boots**"
  - Indirect – "what do you need to **put on your feet**?"

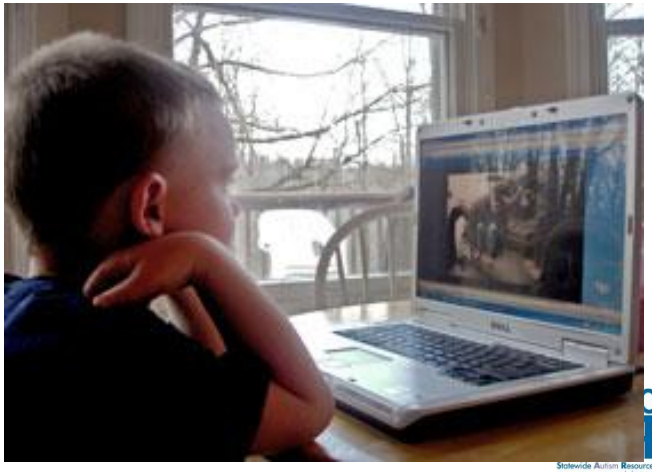
Say it Once and Prompt

If you have told a child a thousand times and he doesn't understand then it isn't the child who is the slow learner.

-Walker Barbee

Visual Prompts

- **Model prompts** is acting out the target behavior by an adult or another child. i.e. Showing the child.
- Providing a model before moving into a physical prompt reduces physical management and promotes the learning of imitation
- May include video models



Modeling Prompt

Visual Prompts

- **Picture prompts** provide a visual cue to the child.

Visual Prompts

- **Gestural prompts** includes pointing to, looking at, moving, or touching an item or area to indicate a correct response.

Physical Prompts

- **Blocking** involves stopping an incorrect response or behavior before it occurs
- **Initiation prompts** involves helping the child to begin an action to complete a task
- **Physical prompts** involves physically assisting the child to complete an action.

Prompt Hierarchy

Motor Response

- Full physical
- Partial physical/touch
- Block
- Model
- Gesture
- Positional

Most

Least

Vocal Response

- Model
- Verbal
- Gesture

Most

Least

Using the correct system of prompting

- Least to most
  - reduces dependency
- Most to least (errorless)
  - reduces errors

Errorless Teaching

- Prompting leads to success 90-100% of the time
- Errorless process:
  - Give an instruction once
  - Wait for a response; prompt before an error occurs within 3-5 seconds of request
  - When a child is first learning a skill, the prompt may be immediate

Fade Prompts

Prompt fading

- Gradually reduce the level of prompting needed. For example:
  - Full physical to partial physical
  - Full physical to gestural
  - Model to verbal
  - Verbal to visual

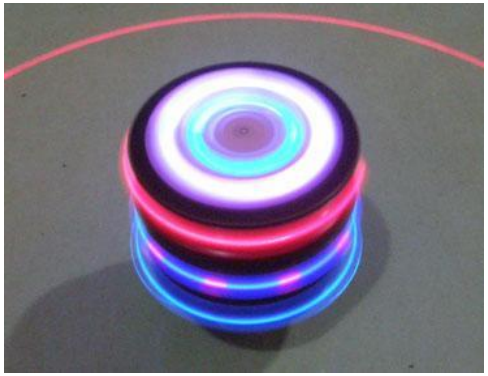
Time delay

- Delay prompt by 1-3 seconds

Motivation

- Capitalizing on interests
- Focus on immediate motivation

Reinforcement



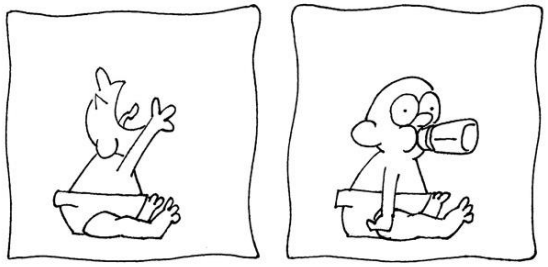
- All people use reinforcement in every day life
- Something is a reinforcer if it increases the behavior that occurred immediately before the reinforcer was delivered.
- Categories of reinforcers - social, tangible, activity

Reinforcement

- A reinforcer can be **positive or negative**.
  - Positive – giving/presenting something to increase a behavior, like a smile, activity, a cookie, or a toy

Reinforcement

- A reinforcer can be **positive or negative**.
  - Negative- taking something away to increase a behavior, like turning off the alarm clock, or a teacher removing a demand so the child will stop screaming.



Negative Reinforcement

A child screams in the grocery store and his mother buys him candy so he will stop. The child stops screaming and in the future the mother buys him candy when he is screaming. The mother's behavior is negatively reinforced.

Removal of aversive (screaming) increases her behavior (candy buying).

Guidelines for Reinforcement

- If it doesn't increase behavior, it isn't a reinforcer. A reward is not the same as a reinforcer.

- So…each child will have different reinforcers.

Guidelines for Reinforcement

- A reinforcer for a child may not be a reinforcer every day or every week.
- Vary reinforcers or the child will satiate.
- Always pair tangible reinforcers with social praise, eye contact, high fives, hugs, brief games.

Types of Reinforcers

Natural	Child says "Car" and you give him the car.
Social	High five, tickles
Activity	Swing, iPad, game
Tangible	Food, toy
Token	Sticker, check

*Not all reinforcement involves tangibles.

Guidelines for Reinforcement

- Use descriptive praise for correct responses
  - "You are working so hard to get your shoes on, we are ready to go outside!"
  - "Thanks for closing the door, you are a great helper for Mommy."
  - "You asked for a cracker. That's great. Here is a cracker."

Note: Praise is often not a reinforcer for many children with ASD. It must be paired with reinforcers in order to become a reinforcer.

Guidelines for Reinforcement

- If reinforcement is being presented after each trial, short-lived reinforcers should be used
  - Single mini M&M
  - One blow on the bubble wand
  - Spinning light for 5 seconds
  - A quick high five and a "Great job!"

Reinforcement Schedules

- Continuous – Reinforce after every correct response
  - Used for acquisition and difficult tasks
- Intermittent – Fixed or variable schedule
  - Used to maintain a behavior
- Start with reinforcement after every trial then thin out the reinforcement schedule once a behavior is learned.

START
Statewide Autism Resources & Training

Reinforcement

- Better responses get a better reinforcer
  - Faster responding
  - Louder responding
  - Longer responding (e.g., time on task)
  - More accurate (e.g., says word more clearly)
- Better reinforcers are
  - More (e.g., popcorn)
  - Better (e.g., favorite color m & m)
  - Longer access (e.g., spinning light)

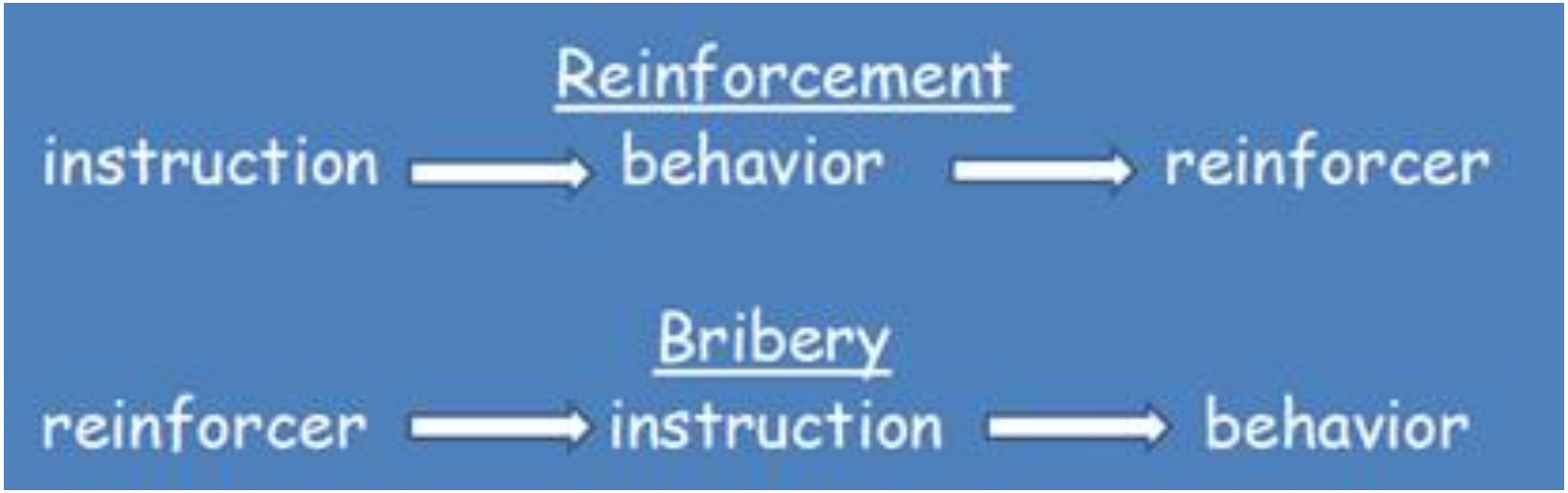
START
Statewide Autism Resources & Training

Engaging Tasks

- A task has to be so engaging that children do not want to escape.

- Boring is not always in the task, but in the environment because you don't have enough reinforcement.

Reinforcement vs. Bribery



Pairing/Rapport Building

- Associate yourself with a reinforcer before instructional demands start.

- Best types of reinforcers for pairing:
  - are controlled by you
  - can be delivered multiple times in small amounts
  - go away by themselves and don't need to be taken away (e.g. bubbles)
  - are somehow better with you than without you (e.g. toy that only you know how to turn on)

- Limit the availability of other reinforcers during pairing

Pairing to Increase Motivation

The goals:

- To help the child view others as "fun" through co-participation in engaging activities
- To help the child view others as valuable--the adults are key to accessing interesting items
- The adult becomes the big chocolate chip cookie

Examples of Organizing Teaching for Specific Skills

ABA Embedded in Routines

Expanding Learning Opportunities

CAMPS Cards

Organizing Teaching Sessions

ABA Embedded in Routines

Home	School	Community
Daily activities: eating, bath time, dressing, bedtime	Arrival and dismissal	Activities in the community: playground/park, library, YMCA
Play	Circle time	Playgroups/play dates
Physical activities	Centers	Neighborhood
Music	Snack	Extracurricular: soccer, dance, swim
Learning activities: reading, numbers & letters	Recess/Movement	
	Group instruction	

START
Statewide Autism Resources & Training

Sample Teaching Procedure

- Domain: Communication
- Objective: Follows 5 different simple one-step directions
- Routines to target: Playing with toys, bedtime, bath, meals, going for a walk
- Data collection: Frequency
- Teaching procedure:
    1. During a routine, give child a simple one-step direction (e.g. put your clothes in the basket, give me the car, wash your feet)
    2. If child follows direction independently, provide positive reinforcement
    3. If child doesn't follow the direction, use a prompting procedure (e.g. errorless)

Instruction Embedded in Routines

		GOALS				
ROUTINES		**Make a choice by pointing**	**Imitate one word**	**Motor imitation**	**Social play**	**Following a simple direction**
	Bath time	Mom & Grandma	Mom & Grandma	Mom & Grandma	Mom & Brother	Mom & Grandma
	Music	Mom & Group leader	Mom	Mom & Group leader		Mom
	Playing with toys	Mom, Dad, Brother		Mom, Dad, Brother	Mom, Dad, Brother	
	Eating	Mom, Dad, & Grandma	Mom, Dad, & Grandma			Mom, Dad, & Grandma

START
Statewide Autism Resources & Training

Embedding Trials

- 3-10 embedded learning trials dispersed throughout the day
- Importance of repetition/practice/mass trials

Expanding Learning Opportunities (ELO)

- Increasing learning opportunities through short sessions of intensive teaching paired with a high quality early childhood program or other programs

- Based on Project DATA for toddlers and preschoolers from Schwartz et al. out of the University of Washington

ELO Project

Taking Data

Identifying a Data Collection System

- Identify an appropriate data system that matches the target behavior
- Use an easy system that is self-graphing for easy analysis
- Review the data regularly and make adjustments as needed

START
Statewide Autism Resources & Training

Frequency Data Sheet

Name: _____

Goal: _____

Total number of ___(behavior)_____ per___(time period)____	Date	Date	Date	Date	Date	Date
	10	10	10	10	10	10
	9	9	9	9	9	9
	8	8	8	8	8	8
	7	7	7	7	7	7
	6	6	6	6	6	6
	5	5	5	5	5	5
	4	4	4	4	4	4
	3	3	3	3	3	3
	2	2	2	2	2	2
	1	1	1	1	1	1
	0	0	0	0	0	0

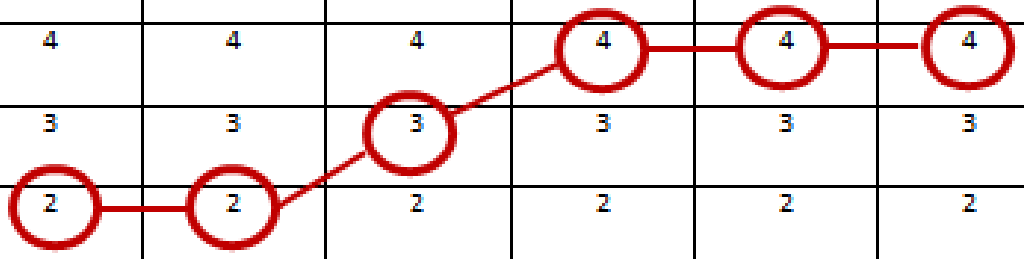
Leach, 2012

Frequency Data Sheet

Name: Kyle H.

Goal: Use single words to identify objects in the environment

Total number of single words per 10 minute activity	Date	Date	Date	Date	Date	Date
	10	10	10	10	10	10
	9	9	9	9	9	9
	8	8	8	8	8	8
	7	7	7	7	7	7
	6	6	6	6	6	6
	5	5	5	5	5	5
	4	4	4	4	4	4
	3	3	3	3	3	3
	2	2	2	2	2	2
	1	1	1	1	1	1
	0	0	0	0	0	0



Yes/No Data Collection Sheet

Name: _____

Goal	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:	Date:
	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

START
Statewide Autism Resources & Training

Prompt Level Data Sheet

Name: _____

Goal	Date:	Date:	Date:	Date:	Date:	Date:	Date:
	4	4	4	4	4	4	4
	3	3	3	3	3	3	3
	2	2	2	2	2	2	2
	1	1	1	1	1	1	1
Goal	Date:	Date:	Date:	Date:	Date:	Date:	Date:
	4	4	4	4	4	4	4
	3	3	3	3	3	3	3
	2	2	2	2	2	2	2
	1	1	1	1	1	1	1

1 = Physical prompting 2 = Model/Visual prompting 3 = Verbal prompting 4 = Independent

START
Statewide Autism Resources & Training

Prompt Level Data Sheet

Name: ___Benjamin_____

Goal	Date: 11/1	Date: 11/2	Date: 11/3	Date: 11/4	Date: 11/6	Date: 11/9	Date:
Imitates motor movements on request	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1
Goal	Date: 11/1	Date: 11/2	Date: 11/3	Date: 11/4	Date:	Date:	Date:
Makes a choice by pointing	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1	4 3 2 1

1 = Physical prompting 2 = Model/Visual prompting 3 = Verbal prompting 4 = Independent

START
Statewide Autism Resources & Training

What to do if a child isn't progressing?

- Determine if the procedures have been implemented with fidelity/correctly
- Is the procedure appropriate for the goals
- Are the reinforcers working
- Is the child motivated
- Is the data being collected correctly

Goal Cards

Goal cards with targets in each of the following areas

- C – Communication goals
- A – Academic goals (numbers, shapes, colors)
- M – Motor goals (gross, fine)
- P – Play goals
- S – Social goals

Why Use CAMPS Cards?

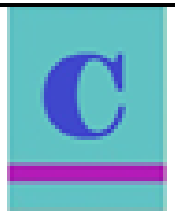
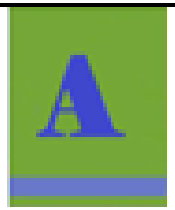
- To increase learning opportunities within activities
- To assure that we're targeting skills across domains
- It's a way of thinking …

Goal Cards for Daily Routines at Home

C: Communication Goals
A: Academic Goals
M: Motor Goals
P: Play Goals
S: Social Goals

START
Statewide Autism Resources & Training

Playing with Pots and Pans

 Communication	Caregiver prompts child to request "open" for cupboard and request a spoon/spatula to bang with; child makes a choice between two presented options (two pans or two spoons) by pointing; caregiver prompts child to sign/say "all done" when finished; caregiver encourages fill-ins: "ready, set, _____ (go)" as they begin banging
 Academic	Child labels or points to pan/spoon; caregiver counts while child is banging; caregiver uses comparative terms to describe the activity ("big/little pot", "loud/quiet banging"); child and caregiver practice with different surfaces to achieve different sounds (large pan, small pan, floor); caregiver narrates child's behavior ("you're banging on the drum", "we're marching in a band")
Motor	Child holds spoon and bangs on the over-turned pan; child marches; stirs with large spoon
Play	Caregiver helps child try new combinations of utensils and pans; caregiver and child pretend to be in a band, marching together while banging; caregiver sings children songs while banging or marching (e.g., "The Ants go Marching one-by-one")
Social	Child and caregiver take turns imitating one another (e.g., caregiver chooses and bangs with the same spoon as the child); sharing/turn-taking with the same spoon ("my turn/your turn")

Bath Time

Communication	Caregiver provides opportunities for the child to make requests (water "on/off", "duck", "pour", "yes/no"); child chooses bath toy when two options are presented; child fills in words in songs (e.g., "this is the way we wash our _____ (tummy)")
Academic	Caregiver helps child to count or sort bath toys/objects, draw or scribble with bath crayons, or identify colors or letters with bath alphabet; caregiver practices body parts (hands, head, nose, tummy) while washing
Motor	Child scoops and pours water, pretends to swim in the water, catches floating toys
Play	Child washes a baby doll or makes a duck swim in the water; caregiver narrates play ("the duck is diving under the water!")
Social	Child plays peek-a-boo with caregiver using the washcloth; child participates in game: "ready, set, ___(go)" (then pours water out of a cup or drops a toy in the water to make a splash)

START
Statewide Autism Resources & Training

Waiting for an Appointment	
 Communication	Child makes a choice between two presented play activity options (or snacks) while in the waiting area (e.g., book or puzzle), the caregiver may wish to create a "waiting backpack" inside which are several special items from home in case the waiting area does not contain interesting materials; caregiver prompts child to say or sign "all done" when finished with toy or activity and request the next item
 Academic	Caregiver counts items in the waiting room (chairs, people, posters) aloud with the child, child is prompted to point to pictures in a book or magazine as the caregiver labels it; caregiver supports academic games on a touch-screen device (if available)
 Motor	Child turns pages of a book, builds with blocks, or uses fine motor skills to complete a puzzle; if one is available, child practices making a finger point to swipe on a device with a touch screen
 Play	Child plays with blocks, a bead toy, or other children's toys in the waiting room; child is prompted to fill in words in children's songs
 Social	Waves "hello" and "bye" to receptionists/doctors/ nurses (with help, as needed); plays peek-a-boo with caregiver; caregiver says "Look!" and points to items in the waiting room (chair, book) to elicit joint attention; caregiver narrates play and supports social-play with other people who are waiting

START
Statewide Autism Resources & Training

Creating your own CAMPS cards

CAMPS Cards: Skill Targets for Young Children with ASD		
C Communication	Requesting	Child is expected to request preferred items either verbally, with sign language, or by pointing to the item; caregiver provides multiple opportunities for requesting to occur by providing only small amounts or stopping activities frequently; if the child doesn't attempt to request, caregiver prompts child to point to/touch preferred item
	Choice-Making	Child points to or labels desired items when two items are presented; caregiver helps the child make a choice, if needed
	Labeling	Caregiver labels and talks about objects or pictures in the immediate environment; this can be with simple words or through narration (verbal description) of play activities; when possible, the caregiver prompts the child to participate through pointing to or verbalizing about the items
	Yes/No	Caregiver prompts the child to shake head or nod, verbally state "yes" or "no", or use pictures/augmentative device to indicate yes/no when an item is presented and a prompt is given, "do you want this?". Caregiver may present multiple opportunities using preferred items to elicit "yes" and non-preferred items to elicit "no".
	Fill-ins	The caregiver uses fill-ins by starting and not completing a common phrase, then pausing to allow the child an opportunity to complete it; if the child doesn't complete the phrase or approximate the missing word, the caregiver simply fills in the final portion and makes another attempt at a later time
A Academic	Pre-academic Concepts	Caregiver references basic academic concepts (colors, shapes, counting) using objects, pictures and activities in the immediate environment; may also target letters, sounds, words and other pre-literacy skills
	Picture Recognition	Caregiver helps child to reference pictures related to activities and objects in the immediate environment helping the child understand upcoming activities and participate in routines
M Motor	Gross and Fine Motor Skills	Caregiver promotes emerging child independence in activities through prompting the child to complete gross and fine motor activities; the caregiver may expose child to new gross motor movements, even if the child is not capable yet (e.g., jumping, throwing, kicking); caregiver may use hand-over-hand prompting to help child dress, hold crayon, etc.
P Play	Pretend Play	Caregiver promotes pretend play (such as making a toy car go "vroom", using a block as an airplane, or feeding a baby doll); caregiver prompts and supports the child to be successful; play may be simple (one step) or thematic (tea party)
	Nursery Rhymes/Songs	Caregiver engages the child in nursery rhymes & songs to promote early literacy skills and social engagement; child may be prompted to participate in motions or observe caregiver completing motions, uses puppets/stuffed animals to act out song
S Social	Observational Learning	Caregiver may demonstrate the activity by using a stuffed animal or doll to illustrate, or by using the materials to show the child the task or activity before it begins; this allows the child to learn through imitation, and can help the child understand the expectations of the task
	Attention-Getting	Caregiver may use silliness or absurdities to gain child attention (putting a shoe on the caregiver's head, making a shirt into the cape) these strategies can help the child to become more aware of the environment; caregiver may also imitate the child's play behaviors as a way to increase the child's attention (reciprocal imitation)
	Joint Attention	Caregiver promotes joint attention by teaching the child to follow and initiate; caregiver points at objects and encourages child to look at these objects; caregiver also encourages child to share interests and activities with others by showing items to other people (siblings, peers, relatives)
	Social Awareness	Caregiver practices activities that encourage recognition and awareness of other people in the environment (greetings in social contexts, peek-a-boo, noticing others in the mirror)
	Turn-Taking	Caregiver models and supports child to engage in turn-taking during activities to promote sharing and basic social skills that contribute to later game-play, etc.

Teaching Session:

What could this look like?

Building Play and Communication Learning Opportunities into Sessions

- If you're working in the home or in a teaching group for a 45-60 minute session, these are possible strategies you can use to increase learning opportunities

- These can be taught to parents to incorporate into daily routines and activities

Social Responsiveness/ Joint Attention 5-15 minutes

- Point to an item (e.g., a toy hanging from the ceiling, flashing light, jack in the box) and make a bid for joint attention (e.g., look!).
- Use exaggerated gestures (e.g., point from the participant's eyes toward the item) to prompt the child to orient toward the item.
- After the child looks at the item, model a comment or gesture for the child to imitate (e.g., wow, silly, uh-oh, hand over mouth)
- Provide a gestural prompt for the child to look back at you, then provide social reinforcement (e.g., smiles, tickles).

Taylor & Hoch (2008)

START
Statewide Autism Resources & Training

Mand Training
5-15 minutes

- Practice requesting with 1-2 highly preferred, specific items
- Prompt the child, as appropriate, to make the request verbally, with pictures, sign language, or with an augmentative device
- Provide the item every time the child communicates (whether prompted or independent)

Object-Oriented Play Skills
5-15 minutes

- Choose targets for the child based on items available in the home
  - Example: banging a drum, pushing a car, shaking a maraca, pushing a pop-up toy, placing a shape in a shape sorter
  - Practice these skills using the 3-Rs; prompt as needed

Imitation of Play Skills
5-15 minutes

- Identify target skills you can teach through imitation
- Teach the play skills using the 3 Rs
- If you can, provide matched toy sets, it makes imitation easier
- Say "do this" as you show the child the play skill and prompt him to complete the task

Home-Based Teaching Sessions

- ☐ All of these options can be implemented with parents as primary instructors
- ☐ You may wish to mix and match your sessions, depending on the specific needs of the child
- ☐ Can conduct several brief sessions spread throughout the day

Social Responsiveness/ Joint Attention

- ☐ Set up the environment with odd or interesting things (e.g., an oversized balloon, a doll hanging from the ceiling, a stuffed animal wearing a wig, a scary mask, a bike or toy turned upside down, spilled liquid on a table)
  - ☐ Initiate a social bid with the child: "Wow!", "Look!", "that's silly!", "uh-oh!", "aaaah!", "oh no!"
- ☐ Provide exaggerated gestures (point to the item)
- ☐ Model a comment about the item "That's a big balloon"
- ☐ Gesture and prompt the child to look back at you (the instructor/caregiver)
- ☐ Provide social reinforcement when the child looks at you (e.g., tickles, high fives)

Steps are based on an article by Taylor & Hoch (2008)

Mand Training/Requesting

- ☐ Have several preferred items available
- ☐ Provide a small portion of a preferred item to the child and prompt communication (verbally, with sign language, using PECS, or with an augmentative device)
- ☐ Continue to provide opportunities for the child to request small portions of the preferred item, and prompt the appropriate request, as needed
- ☐ Fade prompts

Object-Oriented Play Skills

- ☐ Where possible, choose play items based on toys/play materials available in the child's home
- ☐ Practice and prompt play skills with these toys/ materials using the 3-Rs (Request, Response, Reaction)
- ☐ Make a verbal statement to elicit the specific play behavior, "bang the drum", "drive the car", "throw the ball", "color the picture", "stack the blocks", etc.
- ☐ Praise child and/or provide reinforcers for engaging in the play behavior
- ☐ If the child does not show the behavior, prompt him/her to success

Imitative Play Skills

- ☐ Where possible, choose play items based on toys/play materials available in the child's home
- ☐ Practice and prompt imitation of play skills with these toys/ materials using the 3-Rs (Request, Response, Reaction)
- ☐ Say "do this" and demonstrate the play behavior
- ☐ Praise child and/or provide reinforcers for correct responding
- ☐ If the child does not imitate the play behavior, prompt the child so s/he successfully imitates

START
Statewide Autism Resources & Training

Questions

Amy Matthews
matthewa@gvsu.edu

Jamie Owen-DeSchryver
owendesj@gvsu.edu